



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/942,872	08/30/2001	Robert R. Wampler	38190/233787	9504
826	7590	12/29/2003	EXAMINER	
			PEREZ DAPLE, AARON C	
		ART UNIT		PAPER NUMBER
		2121		6

DATE MAILED: 12/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/942,872	WAMPLER, ROBERT R.
	Examiner	Art Unit
	Aaron C Perez-Daple	2121

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 14 November 2003.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-21 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
 a) The translation of the foreign language provisional application has been received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Action is in response to Application filed 08/30/01 and Amendment filed 11/14/03, which have been fully considered.
2. Original claims 1-21 are presented for examination.
3. This Action is made FINAL.

Response to Arguments

Claim Objections

4. The objection to claims 5 and 19 is hereby withdrawn in response to Applicant's amendment.

102 Rejections

5. Applicant's arguments filed 11/14/03 have been fully considered but they are not persuasive. The rejection of **claims 1-21** under 35 U.S.C. 102(e) as being anticipated by Kato (US 5,757,649) is maintained.
6. Applicant's argument with respect to the Kato (US 5,757,649) patent is presented in the last paragraph of page 9 through the second full paragraph of page 11 of the Amendment. The crux of the argument is Applicant's assertion that Kato does not teach or suggest "extracting process information from electronic simulation information." The Examiner respectfully disagrees. First, the Examiner finds that "extracting process information from electronic simulation information" may be interpreted as including the process of inputting by a user design specifications [electronic simulation information] and generating the initial graphical data [process information] by the processor means. This process is well known to

those of ordinary skill in the art and is described by Kato [col. 1, lines 50-65, “When the workpiece W...storing unit (not shown).”]. Kato further discloses using the graphical data to generate the neutral process information [col. 3, lines 45-65, “A first aspect of...condition storing means.”]. As noted in the previous rejection, the Examiner interprets that the neutral process information is the definition tables disclosed by Kato. Applicant has not limited the term “electronic simulation information” to a narrower definition in the specification or the claims, and therefore the broadest reasonable interpretation includes the Examiner’s present interpretation.

Applicant further asserts on page 10 that “as disclosed in the specification of the present application, the electronic simulation information...includes motion device information and information respecting any objects upon which the motion device will operate.” The Examiner points out that limitations from the specification may not be read into the claims. This limitation was not included in the claims, and therefore the argument is moot. The Examiner notes, however, that even if the limitation were included in the claims, it is unclear how to interpret the broadly phrased “motion device information and information respecting any objects upon which the motion device will operate.” Applicant is urged to be more specific in any future amendments to the claims.

Similarly, the claims do not include any limitations directed to verifying “user operation of motion devices produced by a finished set of operation information.” Because the limitation is not included in the claims, the argument is moot.

In accordance with the above, the rejection of claims 1-21 under 35 U.S.C. 102(e) as being anticipated by Kato (US 5,757,649) is properly maintained.

103 Rejections

7. Applicant's arguments filed 11/14/03 have been fully considered but they are not persuasive. The rejection of **claims 1-21** under 35 U.S.C. 103(a) as being unpatentable over Mizuno (US 6,438,444) in view of Nakamura (US 5,757,648) is maintained.
8. Again, the crux of Applicant's argument, found on page 12 of the Amendment, is that neither Mizuno nor Nakamura teach or suggest "extracting process information from electronic simulation information." First, the Examiner points in out that, in contrast to Applicant's assertion, the Examiner did maintain in the prior rejection that Mizuno teaches "formatting process information into neutral process information" [see page 6 of paper 4, non-Final rejection]. The Examiner's admission is limited to Mizuno not teaching "extracting process information from electronic simulation information." Again, the Examiner finds that "extracting process information from electronic simulation information" may be interpreted as including the process of inputting by a user design specifications [electronic simulation information] and generating the initial graphical data [process information] by the processor means, as disclosed by Mizuno [pg. 3, lines 14-30, "According to another...the estimated machining time."]. In an alternative but equally valid interpretation of Nakamura, the electronic simulation could be the "machining figure data" and the process information could be the "machining program." Nakamura teaches converting between different machining data formats [col. 2, line 66 - col. 3, line 13, "According to another...the substitutive machine."] but, admittedly, Nakamura does not specifically teach converting the process information into neutral process information. However, converting process information into neutral process information is the primary

Art Unit: 2121

teaching of Mizuno, as previously noted. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Mizuno by extracting process information from electronic simulation information using the setup component, as taught by Nakamura, in order to convert CAD machining figure data into an operable machine control program for multiple machine types, as further taught by Nakamura [col. 3, lines 14-30, “According to another aspect...the estimated machining time.”].

Applicant’s arguments with respect to the failure of Mizuno and Nakamura to teach verifying “user operation of motion devices produced by a finished set of operation information” are moot because this limitation is not found in the claims.

In accordance with the above, the rejection of **claims 1-21** under 35 U.S.C. 103(a) as being unpatentable over Mizuno (US 6,438,444) in view of Nakamura (US 5,757,648) is properly maintained.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

((e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 1-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Kato (US 5,757,649).

As for claim 8, Kato discloses a system, a method, and a computer program product for controlling the operation of at least one motion device comprising at least one controllable element, said system comprising:

a setup component [CPU, 111, Fig. 2] capable of extracting process information from electronic simulation information, wherein the electronic simulation information includes information relating to the operation of the at least one motion device, wherein said setup component is further capable of formatting the process information into neutral process information [definition tables, col. 3, lines 45-52, “A first aspect...two-dimensional machining shape.”], wherein the neutral process information is in a format independent of a format of the electronic simulation information [col. 3, lines 45-65, “A first aspect...condition storing means.”]; and

at least one motion command component [defining/determining means, col. 9, line 66 – col. 10, line 19, “The program memory 112...which will be described later.”], capable of receiving the neutral process information from said setup component, wherein each motion command component is associated with at least one motion device [107-110, Fig. 1], wherein each motion command component is capable of interpreting the received neutral process information into operation information for the at least one controllable element of each respective motion device [col. 8, lines 43-47, “NC data intrinsic...machining conditions.”], wherein the operation information depends on a type of the at least one motion device, and wherein each motion command component is further capable of distributing the operation information to the at least one controllable element of each respective motion device to thereby control the operation of the respective motion devices [col. 8, lines 35-50,

“According to the CAD/CAM apparatus...to define machining conditions.”; S4, S8, S12, Fig. 20].

11. Claims 1 and 15 are subject to the same limitations as claim 8, therefore the same rejections apply.
12. As for claim 9, Kato discloses, a system according to claim 8, wherein the at least one motion device comprises a plurality of motion devices [107-110, Fig. 1], said setup component is capable of interpreting the neutral process information into operation information specific to the type of each of the plurality of motion devices [col. 8, lines 35-50, “According to the CAD/CAM apparatus...to define machining conditions.”], and wherein each motion command component is capable of distributing the operation information to the at least one controllable element of each respective motion device of the plurality of motion devices [col. 8, lines 35-50, “According to the CAD/CAM apparatus...to define machining conditions.”; S4, S8, S12, Fig. 20].
13. Claims 2 and 16 are subject to the same limitations as claim 9, therefore the same rejections apply.
14. As for claim 10, Kato discloses a system according to claim 8, wherein the electronic simulation information comprises electronic simulation information in at least one format [inherent], and wherein said setup component is capable of formatting the process information extracted from the electronic simulation information into the neutral process information in a neutral format independent of the at least one format of the electronic simulation information [col. 3, lines 45-65, “A first aspect...condition storing means.”].

Art Unit: 2121

15. Claims 3 and 17 are subject to the same limitations as claim 10, therefore the same rejections apply.
16. As for claim 11, Kato discloses a system according to claim 11, wherein the at least one motion device operates according to operation information in the at least one format, and wherein each motion command component is capable of interpreting the neutral process information into operation information in the format of each respective motion device [col. 8, lines 35-50, “According to the CAD/CAM apparatus...to define machining conditions.”; S4, S8, S12, Fig. 20].
17. Claims 4 and 18 are subject to the same limitations as claim 11, therefore the same rejections apply.
18. As for claim 12, Kato discloses a system according to claim 8, wherein the electronic simulation information comprises electronic simulation information in at least one format [inherent, col. 3, “A first aspect...condition storing means.”], wherein the at least one motion device operates according to operation information in at least one format, wherein said setup component is capable of formatting the process information extracted from the electronic simulation information into the neutral process information in a neutral format independent of the at least one format of the electronic simulation information, and wherein each motion command component is capable of interpreting the neutral process information into operation information in the format of each respective motion device [col. 8, lines 35-50, “According to the CAD/CAM apparatus...to define machining conditions.”; S4, S8, S12, Fig. 20].
19. Claims 5 and 19 are subject to the same limitations as claim 12, therefore the same rejections apply.

20. As for claim 13, Kato discloses a system according to claim 12, wherein said setup component is capable of formatting the process information into the neutral process information in a neutral format independent of the at least one format of the electronic simulation information, and further independent of the at least one format of the operation information of the at least one motion device [col. 3, lines 45-65, “A first aspect...condition storing means.”].
21. Claims 6 and 20 are subject to the same limitations as claim 13, therefore the same rejections apply.
22. As for claim 14, Kato discloses a system according to claim 8, wherein the at least one motion device comprises at least one machine tool [107-10, Fig. 1], and wherein each motion command component is capable of distributing the operation information to each respective machine tool to thereby control the operation of the respective machine tools [col. 8, lines 35-50, “According to the CAD/CAM apparatus...to define machining conditions.”; S4, S8, S12, Fig. 20].
23. Claims 7 and 21 are subject to the same limitations as claim 13, therefore the same rejections apply.

Claim Rejections - 35 USC § 103

24. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

25. Claims 1-21 rejected under 35 U.S.C. 103(a) as being unpatentable over Mizuno (US, 6,438,444) in view of Nakamura (US 5,757,648).

As for claim 8, Mizuno teaches a system, a method, and a computer program product for controlling the operation of at least one motion device comprising at least one controllable element, said system comprising:

a setup component [host computer, 2, Fig. 1], wherein said setup component is capable of formatting process information into neutral process information [modules, col. 2, lines 54-67, "Preferably, the external storage...each numerical control device."]; and

at least one motion command component [CPU of numerical control devices #1-n, Fig. 1], capable of receiving the neutral process information from said setup component, wherein each motion command component is associated with at least one motion device [#1-n, Fig. 1], wherein each motion command component is capable of interpreting the received neutral process information into operation information for the at least one controllable element of each respective motion device, wherein the operation information depends on a type of the at least one motion device, and wherein each motion command component is further capable of distributing the operation information to the at least one controllable element of each respective motion device to thereby control the operation of the respective motion devices [col. 5, line 23 – col. 7, line 10, "Referring now to the block diagram...in the volatile memory b."].

Although obvious to one of ordinary skill in the art, Mizuno does not specifically disclose extracting process information from electronic simulation information using the setup component, wherein the electronic simulation information includes information relating to

the operation of the at least one motion device, and wherein the neutral process information is in a format independent of a format of the electronic simulation information.

However, Nakamura teaches extracting process information from electronic simulation information using a setup component, wherein the electronic simulation information includes information relating to the operation of the at least one motion device, and wherein the process information is in a format independent of a format of the electronic simulation information [col. 2, line 6 – col. 3, line 42, “The present invention is...of each machine equipment.”].

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Mizuno by extracting process information from electronic simulation information using the setup component, as taught by Nakamura, in order to convert CAD machining figure data into an operable machine control program for multiple machine types, as further taught by Nakamura [col. 3, lines 14-30, “According to another aspect...the estimated machining time.”].

26. Claims 1 and 15 are subject to the same limitations as claim 8, therefore the same rejections apply.
27. As for claim 9, Mizuno discloses, a system according to claim 8, wherein the at least one motion device comprises a plurality of motion devices [#1-n, Fig. 1], said setup component is capable of interpreting the neutral process information into operation information specific to the type of each of the plurality of motion devices, and wherein each motion command component is capable of distributing the operation information to the at least one controllable

Art Unit: 2121

element of each respective motion device of the plurality of motion devices [col. 2, line 54 – col. 3, line 24, “Preferably, the external storage...each axis of the machine.”].

28. Claims 2 and 16 are subject to the same limitations as claim 9, therefore the same rejections apply.

29. As for claim 10, Mizuno teaches the concept and advantages of using neutral process information to generate specific control software for multiple machine types. However, Mizuno does not specifically teach the extraction of process information from electronic simulation information.

Nakamura teaches the extraction of process information from electronic simulation information [col. 2, line 5 – col. 3, line 43, “The present invention is...of each machine equipment.”].

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Mizuno by extracting process information from electronic simulation information, wherein the electronic simulation information comprises electronic simulation information in at least one format, and wherein said setup component is capable of formatting the process information extracted from the electronic simulation information into the neutral process information in a neutral format independent of the at least one format of the electronic simulation information in order to convert CAD machining figure data into an operable machine control program for multiple machine types, as taught by Nakamura [col. 3, lines 14-30, “According to another aspect...the estimated machining time.”].

30. Claims 3 and 17 are subject to the same limitations as claim 10, therefore the same rejections apply.

31. As for claim 11, Mizuno discloses a system according to claim 11, wherein the at least one motion device operates according to operation information in the at least one format, and wherein each motion command component is capable of interpreting the neutral process information into operation information in the format of each respective motion device [col. 2, line 54 –col. 3, line 24, “Preferably, the external storage...each axis of the machine.”].

32. Claims 4 and 18 are subject to the same limitations as claim 11, therefore the same rejections apply.

33. As for claims 12 and 13, Mizuno teaches the concept and advantages of using neutral process information to generate specific control software for multiple machine types. Mizuno further discloses a system similar to that of claim 8, wherein the at least one motion device operates according to operation information in at least one format and wherein each motion command component is capable of interpreting the neutral process information into operation information in the format of each respective motion device and wherein the neutral process information is in a neutral format independent of the at least one format of the operation information of the at least one motion device device [col. 2, line 54 –col. 3, line 24, “Preferably, the external storage...each axis of the machine.”].

Mizuno does not specifically teach the extraction of process information from electronic simulation information. Nakamura teaches the extraction of process information from electronic simulation information [col. 2, line 5 – col. 3, line 43, “The present invention is...of each machine equipment.”].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Mizuno by extracting process information from electronic simulation

information, wherein the setup component is capable of formatting the process information extracted from the electronic simulation information into the neutral process information in a neutral format independent of the at least one format of the electronic simulation information, in order to convert CAD machining figure data into an operable machine control program for multiple machine types, as taught by Nakamura [col. 3, lines 14-30, “According to another aspect...the estimated machining time.”].

34. Claims 5 and 19 are subject to the same limitations as claim 12, therefore the same rejections apply.
35. Claims 6 and 20 are subject to the same limitations as claim 13, therefore the same rejections apply.
36. As for claim 14, Mizuno discloses a system according to claim 8, wherein the at least one motion device comprises at least one machine tool [#1-n, Fig. 1], and wherein each motion command component is capable of distributing the operation information to each respective machine tool to thereby control the operation of the respective machine tools [col. 2, line 54 – col. 3, line 24, “Preferably, the external storage...each axis of the machine.”].
37. Claims 7 and 21 are subject to the same limitations as claim 13, therefore the same rejections apply.

Conclusion

38. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

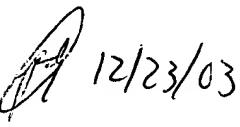
Art Unit: 2121

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

39. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron C Perez-Daple whose telephone number is (703)305-4897. The examiner can normally be reached on 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anil Khatri can be reached on (703)305-0282. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

 12/23/03
Aaron Perez-Daple


ANIL KHATRI
SUPERVISORY PATENT EXAMINER